

DOCKET NO: 268099US0PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
JULIANE KRUESEMANN, ET AL. : EXAMINER: PATRICIA L. HAILEY  
SERIAL NO: 10/529,862 :  
FILED: APRIL 1, 2005 : GROUP ART UNIT: 1793  
FOR: USE OF PREPARATIONS :  
COMPRISING PIGMENTS AND  
DYESTUFFS FOR THE DECORATION  
COLORING OF DERIVED TIMBER  
PRODUCTS

APPEAL BRIEF

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

This is an appeal of the Final Rejection dated March 22, 2007 of Claims 1-6, 8, 9, 11 and 12. A Notice of Appeal, along with a two-month extension of time, was timely filed on August 22, 2007.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is BASF Aktiengesellschaft, having an address at 67056 Ludwigshafen, Germany.

## II. RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' legal representative and the assignee are aware of no appeals, interferences, or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

## III. STATUS OF THE CLAIMS

Claims 1-6, 8, 9, 11 and 12 stand rejected and are herein appealed. Claim 7 and 10 have been canceled.

## IV. STATUS OF THE AMENDMENTS

An amendment under 37 CFR 41.33 was filed on October 9, 2007. In an Advisory Action entered October 31, 2007, the Examiner indicated that the amendment would be entered. In addition, the Examiner indicated that the rejection under 35 U.S.C. § 112, first paragraph, was withdrawn.

## V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent Claim 1 is drawn to a method for the decorative coloration of a product selected from the group consisting of MDF, HDF and chipboard, comprising applying a liquid colorant preparation that comprises at least one pigment and, based on the pigment, from 0.5% to 10% by weight of at least one dye to the product.

See original Claims 1 and 7, and the specification at page 2, lines 25-28 combined with page 14, lines 11-13.

## VI. GROUNDS OF REJECTION

Claims 1-6, 8, 9, 11 and 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over US 3,939,454 (Thornber et al) in view of US 6,503,317 (Ortalano et al).

## VII. ARGUMENT

Claims 1-6, 8, 9, 11 and 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Thornber et al in view of Ortalano et al. The rejection is untenable and should not be sustained.

As described in the specification, the present invention is drawn to solving a problem of inability to obtain colored derived timber products, such as high density fiberboard (HDF), medium density fiberboard (MDF) and chipboard, having high brilliance, lightfastness and heatfastness (page 2, lines 20-23). Applicants describe the disadvantages from using dyes (page 1, lines 29-41) and from using pigments (page 1, line 43 to page 2, line 12), as well as a prior art preparation disclosed in EP 0 049 777 using both dyes and pigments, although dyes are used in excess, i.e., at least 30% by weight of dye, based on the pigment (page 2, lines 14-18).

The present invention successfully addresses the above problem. An embodiment thereof, as reflected in Claim 1, is a method for the decorative coloration of a product selected from the group consisting of MDF, HDF and chipboard, comprising applying a liquid colorant preparation that comprises at least one pigment and, based on the pigment, from 0.5% to 10% by weight of at least one dye to the product.

Thornber et al is drawn to a method for making colored particleboard using a water soluble dyestuff to color individual wood particles (column 1, line 19ff). Thornber et al is an example of the prior art alluded to above. Ortalano et al is drawn to an aqueous-based

pigment dispersion containing pigment dispersed in a disperse dye (column 3, lines 47-50) for addition to printing ink, paint, pulp and paper, coatings and textiles for coloration purposes (column 1, lines 12-15). The Examiner holds, in effect, that it would have been obvious to use the aqueous-based pigment dispersion of Ortalano et al to color the particleboard of Thornber et al.

Absent the present disclosure as a guide, one skilled in the art would not have combined Thornber et al and Ortalano et al. But even if combined, the result would not have been the claimed invention.

First of all, the Examiner has not established any relationship between the particleboard of Thornber et al and the paper of Ortalano et al such that one skilled in the art would look to the paper art for solutions to problems in coloring particleboard. Indeed, the Examiner has already acknowledged the steps--combining particles with a resin binder or adhesive to form a mattress followed by hot-pressing at elevated temperature and pressure--disclosed by Thornber et al for making particleboard.

To make pulp or paper, on the other hand, and as widely known, the wood fibers usually are processed to remove the lignin to give cellulose. (This procedure is not necessary in the manufacture of derived timber products such as HDF, MDF and chipboard.) The cellulose is then mixed with water, binder, optionally fillers and coloring agents to give a pulp usually containing about 99 wt% of water. The amount of binder is about 1 wt% based on the cellulose. Binders used in the manufacture of paper include alkenyl succinic acid, alkylated ketene dimer or chemically modified natural resins. The binders are mixed into the pulp to render the paper hydrophobic, making it possible to write on it. The binders do not serve as glue. The flowable pulp is processed further by casting on a sieve, dewatering, pressing and drying at temperatures of about 70-100°C.

Apart from the raw material, neither the end products nor the manufacturing processes, e.g., parameters like temperatures, pressures, water content, mechanical treatment, nor the chemicals used are the same in paper fabrication and in the production of derived timber products. The coloring agents have to meet totally different requirements depending on the process in which they are to be used.

Second of all, one skilled in the art would not derive from Ortalano et al the use of coloring agents comprising pigment and only 0.5-10 wt.% of dye based on the pigment. Ortalano et al neither discloses nor suggests a particular concentration ratio of dye to pigment (other than the pigment is dispersed in the dye), let alone the small concentration ratio according to the present invention. Ortalano et al discloses aqueous based pigment compositions comprising 1 to about 50 wt% dye (column 5, lines 8-12) and 1 to about 50 wt% pigment (column 5, lines 54-58). Example 22 (column 9, lines 10-14) describes the pigment composition with the lowest content of dye in respect to the pigment. The coloring agent used contains about 6/26, or 23 wt% dye based on the pigment.

Indeed, it is very surprising and unexpected that the small amount of dye in the coloring pigment containing agent according to the present invention is sufficient to obtain the MDF, HDF and chipboard with the beneficial properties described in the specification herein (page 15, lines 5-9). The physical explanation for the effect is that the dye is absorbed by the particles and covers the brownish-yellowish color inhered by the wood particles. The coverage of the inherent color of the wood particle together with the use of the pigments gives the MDF, HDF and chipboards with the brilliant and lightfast coloration according to the present invention.

In the Advisory Action, in response to Applicants' arguments, the Examiner finds that motivation to combine the references "is found in Thornber et al's method for coloring

particleboard . . . with water-soluble dyestuffs, and in Ortalano et al's pigment dispersions, which comprise components corresponding to Applicants' claimed components, and the employment of these dispersions in, inter alia, pulp and paper, coatings, and textiles.

In reply, this finding simply states what each of these references discloses, but does not explain the motivation to combine them. As Applicants have discussed above, there is no motivation but even if there was, the combination neither discloses nor suggests the presently-claimed invention.

In the Advisory Action, the Examiner relies on Ortalano et al's disclosure that their dispersions may comprise from about 1 to about 50 wt% of dye, based on the total weight of the composition (column 5, lines 8-11), and from about 1 to about 50 wt% of pigment, based on the total weight of the composition (column 5, lines 54-56), and then takes the lower endpoint for the dye, i.e., 1 wt%, and the upper endpoint for the pigment, i.e., 50 wt%, to arrive at 2% dye based on the pigment.

In reply, Applicants do not dispute the Examiner's arithmetic. However, individual disclosures in Ortalano et al of 1-50 wt% of dye and 1-50 wt% of pigment does not mean that Ortalano et al contemplates every mathematical combination of these percentages. In addition, since the example closest to that recited in the present claims, i.e., Example 22, contains 23 wt% dye based on the pigment, it can easily be concluded that Ortalano et al does not contemplate a percentage as low as 10 wt%. In addition, an amount of 2% dye, based on the pigment, as found by the Examiner, would hardly appear to comply with the requirement of Ortalano et al that the pigment be dispersed in the dye (column 3, lines 47-50). Nor is Ortalano et al otherwise relevant, for reasons discussed above.

For all the above reasons, it is respectfully requested that this rejection be REVERSED.

VIII. CONCLUSION

For the above reasons, it is respectfully requested that all rejection be REVERSED.

Respectfully submitted,

Customer Number

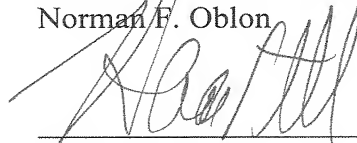
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CLAIMS APPENDIX

Claim 1: A method for the decorative coloration of a product selected from the group consisting of MDF, HDF and chipboard, comprising applying a liquid colorant preparation that comprises at least one pigment and, based on the pigment, from 0.5% to 10% by weight of at least one dye to the product.

Claim 2: The method of claim 1, wherein the preparation comprises

- (A) at least one pigment,
- (B) at least one dye,
- (C) at least one dispersant,
- (D) water or a mixture of water and at least one water retainer, and
- (E) optionally further customary constituents for colorant preparations.

Claim 3: The method of claim 1, wherein component (B) of the preparation comprises at least one anionic or cationic dye.

Claim 4: The method of claim 1, wherein component (C) of the preparation comprises at least one nonionic surface-active additive, at least one anionic surface-active additive or a mixture thereof.

Claim 5: The method of claim 2, wherein the water retainer of the preparation comprises a high-boiling organic solvent that is soluble in or miscible with water.

Claim 6: The method of claim 1, wherein the preparation comprises



from 10% to 70% by weight of component (A),  
from 0.05% to 7% by weight of component (B),  
from 1% to 50% by weight of component (C),  
from 10% to 88.95% by weight of component (D), and  
from 0% to 5% by weight of further customary constituents for colorant preparations,  
each percentage being based on the total weight of the preparation.

Claim 8: A method for producing colored board that is multicolored in layers or marbled comprising utilizing the method of claim 1.

Claim 9: A method for producing electroconductive black board comprising utilizing the method of claim 1.

Claims 11: An article produced by the method as claimed in claim 1.

Claim 12: The article as claimed in claim 11 wherein said article is colored board or electroconductive black board.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.